

REMARKS

Claims 13-16 are pending in the application, with Claim 13 being the only independent claim.

In the Office Action dated August 11, 2005, Claims 13, 15 and 16 were rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent No. 6,114,020 (Misuda et al.). Claim 14 was rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Misuda et al., in view of U.S. Patent No. 5,175,133 (Smith et al.). These rejections are respectfully traversed for the following reasons.

Applicants' invention as recited in Claim 13 is directed to a process for producing a recording medium for ink-jet recording having an ink-receiving layer including a particulate material on a base material. The process includes the steps of: grinding aluminum oxide particles of the γ -crystal structure and removing a coarse particle component by a separation treatment such that the average particle diameter of the aluminum oxide particles of the γ -crystal structure is at least 0.21 μm and at most 1.0 μm , and at least 90% of all particles of the aluminum oxide particles of the γ -crystal structure have a particle diameter of at most 1.0 μm ; and applying onto the base material the aluminum oxide particles of the γ -crystal structure subjected to the treatment of removing the coarse particle component with a binder. At least 90% by weight of the particulate material is the aluminum oxide particles of the γ -crystal structure.

The aluminum oxide particles of the γ -crystal structure as used in the present invention have comparatively high hardness. As a result, an ink-receiving layer including the aluminum oxide particles can have the advantage of hardly causing cracks on the surface.

In contrast to the present invention, although conventional aluminum oxide particles of the γ -crystal structure have comparatively high hardness, these particles are produced in a production process that includes a sintering step. The result of the sintering step is particles having a large particle diameter due to aggregation of the particles. As a consequence of such a production process, it has been difficult to achieve both good ink absorbency and glossiness in a recording medium utilizing the conventional aluminum oxide particles of the γ -crystal structure.

In the present invention that difficulty can be overcome because the aluminum oxide particles of the γ -crystal structure are subjected to grinding treatment, and then a coarse particle component is removed. This two step process results in particles having a specific particle diameter range (at least $0.21\mu\text{m}$ and at most $1\mu\text{m}$).

In contrast thereto, Misuda et al. does not mention an ink-receiving layer including aluminum oxide particles of the γ -crystal structure. In Misuda et al. a porous layer comprising resin particles is formed as an uppermost layer provided on the ink-receiving layer (col. 2, lines 39-46). Thus, Misuda et al. does not address the technical problem of improving surface strength of the ink-receiving layer as in the present invention.

Additionally, Misuda et al. discloses in Example 1 that the hydrolyzate prepared according to the prescribed procedure is treated by a defloculation process. The Examiner asserts in the Advisory Action mailed December 20, 2005, that this defloculation process is equivalent to Applicants' claimed grinding step. Assuming, *arguendo*, that the defloculation process and grinding step are equivalent, Applicants submit that Misuda et al. fails to teach or suggest removing a coarse particle component by a separation treatment

such that the average particle diameter of the aluminum oxide particles of the γ -crystal structure is at least 0.21 μm and at most 1.0 μm , as recited in Claim 13.

Smith et al. was cited for teaching a specific separation treatment, and is not read to remedy the above-noted deficiencies of Misuda et al.


Therefore, in view of the remarks filed on November 14, 2005, and the remarks submitted herein, Applicants submit that none of the cited references teaches or suggests Applicants' presently claimed invention. Accordingly, Applicants respectfully request reconsideration and withdrawal of rejections under §§ 102 and 103.

Applicants submit that the present invention is patentably defined by independent Claim 13. Dependent Claims 14-16 are also patentable, in their own right, for defining features of the present invention in addition to those recited in Claim 13. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark A. Williamson", written over a horizontal line.

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